

Gordon, Stephanie

From: McClain-Vanderpool, Lisa
Sent: Friday, July 11, 2014 8:37 AM
To: Stavnes, Sandra; Bahrman, Sarah
Cc: Smith, Paula; Mylott, Richard; Williams, Laura
Subject: ACTION: AP inquiry on ND - early deadline this AM

Follow Up Flag: Follow up
Flag Status: Completed

James MacPherson from AP would like to know -- I know the Tribe is the lead however --

- 1) Is EPA relying on the company responsible for the spill for testing? Or are we (or the tribe?) doing it independently?
- 2) Have we tested both upstream and down?
- 3) Have we tested the Missouri River? (He claims the state thinks it has reached the river).
- 4) If we've tested, what did we find? What is in it?

He has an early deadline on this -- so before noon --

I left a vmail for Pete Stevenson on his cell.

Lisa

Gordon, Stephanie

From: Mylott, Richard
Sent: Thursday, July 10, 2014 1:42 PM
To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Stavnes, Sandra
Subject: AP: EPA Trying to Confirm ND Spill Didn't Reach Lake

EPA Trying to Confirm ND Spill Didn't Reach Lake

MANDAREE, N.D. — Jul 10, 2014, 3:35 PM ET
By JOSH WOOD and JAMES MacPHERSON Associated Press

AP

Officials are assessing a spill of oil-drilling saltwater from a North Dakota pipeline to ensure none of the brine affected the lake an American Indian reservation uses for drinking water, the Environmental Protection Agency said Thursday.

In its first public statement in the two days since the spill was detected, the agency said it had no confirmed reports that the saltwater had reached Bear Den Bay. It leads to Lake Sakakawea, which provides water for the Fort Berthold reservation occupied by the Mandan, Hidatsa and Arikara tribes in the heart of western North Dakota's booming oil patch.

EPA said most of the spill was pooled on the ground, soaked into the soil and held behind beaver dams. It said the leak involved an estimated 24,000 barrels, or 1 million gallons, of saltwater and condensate, which are byproducts of oil and gas production.

Cleanup at the reservation site continued Thursday and was expected to last for weeks, said Miranda Jones, the vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Partners Inc.

Jones said the leak at the underground pipeline, owned by Crestwood subsidiary Arrow Pipeline LLC, likely started over the Fourth of July weekend. The pipeline was not equipped with a system that sends an alert when there is a leak, she said, and the spill was only discovered when the company was going through production loss reports.

"This is something no company wants on their record, and we are working diligently to clean it up," Jones said.

Although the EPA said additional assessment activity was being conducted, company and tribal officials said the spill had been contained and did not affect the lake.

"We have a berm and a dike around it, around that bay area, to keep it from going into the lake," said Three Affiliated Tribes Chairman Tex Hall.

Saltwater is a naturally occurring, unwanted byproduct of oil and natural gas production that is between 10 and 30 times saltier than sea water. The state considers it an environmental hazard.

The briny byproduct also may contain petroleum and residue from hydraulic fracturing operations.

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Karolin Rockvov, a McKenzie County emergency manager, said it was apparent from looking at vegetation that the spill went undetected for some time.

The number of saltwater spills in North Dakota has grown with the state's soaring oil production. North Dakota produced 25.5 million barrels of brine in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

Fort Berthold Indian Reservation plays a key role in the state's oil production, the second-highest in the nation. The reservation currently represents more than 300,000 of North Dakota's 1 million barrels of oil produced daily, according to the state's Department of Mineral Resources.

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Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

Saltwater leak alters water supply for 1 ND town

By Associated Press July 9 at 5:31 PM

MANDAREE, N.D. — Tribal leaders switched to an alternative source of water Wednesday for one town on an American Indian reservation in North Dakota following a substantial leak from a saltwater pipeline.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said the spill was reported Tuesday but officials did not have any information on volumes or if the brine had reached Bear Den Bay, a tributary to Lake Sakakawea. The lake, a reservoir of the Missouri River, provides drinking water to several communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water.

Three Affiliated Tribes Chairman Tex Hall said in a statement that "there are no specific concerns over the water safety" but that tribal officials closed the water intake to Mandaree as a precaution without elaborating on what steps were taken. Hall said the briny water did not appear to have reached Lake Sakakawea.

Houston-based Crestwood Midstream Services Inc., owner of the pipeline, said in a statement Wednesday that the spill was contained and cleanup was underway. The company said it was investigating the cause of the leak but would not comment beyond its statement.

The federal Environmental Protection Agency said an investigator was heading to the site Wednesday afternoon.

Roberts said damage from the toxic spill could be seen Wednesday.

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From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 12:01 PM
To: Bahrman, Sarah; Romero, David
Cc: edmundbaker@mhanation.com; dprice@mhanation.com; Huff, Blake
Subject: Bear Den Creek-Baseline data
Attachments: Bear_Den_Creek.xls

Sarah and David,

Here is the baseline data we have for Bear Den Creek.

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
Fax: (303) 312-7150

<http://www.epa.gov/region8/ecosystems/>

US EPA Region 8
1595 Wynkoop Street
Mail Code 8EP-EPR
Denver, Colorado 80202

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From: Yersak, Thomas
Sent: Thursday, July 10, 2014 11:41 AM
To: Pfeiffer, Tricia; Joel Galloway; Anthony Ranalli
Cc: Oberley, Gregory
Subject: RE: information request

ALCON:

Station ID is Bear Den Creek. Date was aggregated for chloride, dissolved Oxygen and nitrate; see below table. The source is retro data from USGS; see attached spreadsheet,

Station ID	Longitude	Latitude	Monitoring Location Type Name	avg Chloride	max Chloride	avg Dissolved oxygen	max Dissolved oxygen	av
USGS-06332515	102.768526	47.787237	Stream	4.319	180.000	10.482	16.400	

V/r

Thomas Yersak
SEE: Water and Energy Specialist
Tribal NPDES/UIC/NEPA Data Support
Cube: 5146
Phone: 312-6671

From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 11:09 AM
To: Joel Galloway; Anthony Ranalli
Cc: Yersak, Thomas; Oberley, Gregory
Subject: information request

Can we get a spread sheet together for existing surface water quality data for section 19, T150N, 94W in Bear Den Creek? This is needed for the recent spill—emergency response is looking for baseline for Bear Den Creek.

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
Fax: (303) 312-7150

<http://www.epa.gov/region8/ecosystems/>

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Gordon, Stephanie

From: Glenda Embry <gembry@mhanation.com>
Sent: Friday, July 11, 2014 3:11 PM
To: Mylott, Richard
Subject: brine leak on reservation

UPDATE: The Crestwood pipeline spill that leaked 24,000 barrels of saltwater brine in the Bear Den Bay area just north of Mandaree has been contained. Tribal regulatory officials, along with Miranda Jones, Crestwood Vice President of Environmental & Safety Division are on site. They are piping brine out of the Bay to tanks on the hill overlooking the site. Soil and water are being tested and reclamation and clean-up efforts are underway.

Glenda Baker Embry
Public Information Officer
Office of the Chairman
Mandan, Hidatsa & Arikara Nation
gembry@mhanation.com
Cell 701.421.8049
Ofc 701.627.8242

Gordon, Stephanie

From: Mohr, Mindy
Sent: Wednesday, July 09, 2014 1:03 PM
To: Bahrman, Sarah
Cc: Kahn, Lisa; Copeland, Michael
Subject: call from Greg Wavra, ND

Hi Sarah,

Greg called a few minutes after finishing a meeting with Pete Stevenson, the OSC that Region 8 sent up. He said Pete was going up to the site of the leaking pipeline valve.

Greg looked at a map of the spill area and said there are no ND-regulated systems pulling water from that area, which is good news. He did not have any concrete information on sampling that's been conducted, even after talking to Kris Roberts from ND DOH earlier today. Greg suggested touching base with Pete after he learns more.

Mindy

Mindy Mohr
Tribal Liaison
303-312-6525 or toll free 1-800-227-8917
mohr.mindy@epa.gov
FAX 1-877-876-9191

Gordon, Stephanie

From: Mylott, Richard
Sent: Thursday, July 10, 2014 12:01 PM
To: apbismarck@ap.org
Subject: EPA statement on brine spill

EPA is providing technical support to the Tribe as it leads assessment and cleanup activities at the spill site. There are several parties involved in response activities. The most recent spill estimate is 24,000 barrels of brine and condensate. The majority of the spill is pooled on the ground, soaked into the soil, and contained behind beaver dams in a nearby draw. The line has been shut down and steps have been taken to contain the discharge in the draw, including the placement of boom material at the mouth of the draw. Currently, the primary concern is the high salinity of the discharge and impacts on soil, vegetation and water in the draw. Cleanup efforts will focus on pumping and flushing water through a series of beaver ponds along the draw. We have no confirmed reports of brine reaching the bay or lake, however, additional assessment activity will take place today.

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From: Mylott, Richard
Sent: Thursday, July 10, 2014 11:12 AM
To: gembry@mhanation.com
Subject: EPA statement on brine spill

Hi Glenda—per my vm, we are getting lots of calls re: the brine spill. I am hoping to use something along the lines of below as a statement. Please advise asap. Thanks!

Rich Mylott
USEPA Region 8 Communications
303-312-6654
.....

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303-312-6654
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EPA is providing technical support to the Tribe as it leads assessment and cleanup activities at the spill site. The spill estimate is 24,000 barrels of brine and condensate. The majority of it is estimated to have pooled on the ground, soaked into the soil, and contained behind beaver dams in a nearby draw. The line has been shut down and steps have been taken to contain the discharge in the draw, including the placement of boom material at the mouth of the draw. The primary concern is the salinity of the discharge and its impacts on soil and vegetation. Cleanup efforts will focus on pumping and flushing water through a series of beaver ponds along the draw. We have no confirmed reports of oil in the lake, however, additional assessment activity will take place today.

Gordon, Stephanie

From: Mylott, Richard
Sent: Thursday, July 10, 2014 12:01 PM
To: apbismarck@ap.org
Subject: EPA statement on brine spill

EPA is providing technical support to the Tribe as it leads assessment and cleanup activities at the spill site. There are several parties involved in response activities. The most recent spill estimate is 24,000 barrels of brine and condensate. The majority of the spill is pooled on the ground, soaked into the soil, and contained behind beaver dams in a nearby draw. The line has been shut down and steps have been taken to contain the discharge in the draw, including the placement of boom material at the mouth of the draw. Currently, the primary concern is the high salinity of the discharge and impacts on soil, vegetation and water in the draw. Cleanup efforts will focus on pumping and flushing water through a series of beaver ponds along the draw. We have no confirmed reports of brine reaching the bay or lake, however, additional assessment activity will take place today.

Gordon, Stephanie

From: Stevenson, Peter
Sent: Tuesday, August 05, 2014 12:41 PM
To: Roos, Judy
Subject: FW: ACTION: AP inquiry on ND - early deadline this AM

From: Stevenson, Peter
Sent: Friday, July 11, 2014 10:16 AM
To: Romero, David
Subject: Re: ACTION: AP inquiry on ND - early deadline this AM

Already did

From: Romero, David
Sent: Friday, July 11, 2014 10:14:51 AM
To: Stevenson, Peter
Subject: FW: ACTION: AP inquiry on ND - early deadline this AM

See below...I forgot to include you in on the first correspondence.

From: Romero, David
Sent: Friday, July 11, 2014 10:08 AM
To: Stavnes, Sandra
Cc: McClain-Vanderpool, Lisa
Subject: RE: ACTION: AP inquiry on ND - early deadline this AM

I don't....but I think Pete can help. Pete before you leave today can you help out with these questions?

From: Stavnes, Sandra
Sent: Friday, July 11, 2014 10:04 AM
To: Romero, David
Cc: McClain-Vanderpool, Lisa
Subject: FW: ACTION: AP inquiry on ND - early deadline this AM

David do you have any insight into these questions for Lisa?

Sandy

Sandra A. Stavnes
Deputy Assistant Regional Administrator
Ecosystems Protection and Remediation (8EPR)
USEPA Region 8
1595 Wynkoop St
Denver, CO 80202
email: stavnes.sandra@epa.gov
phone: 303-312-6117

From: McClain-Vanderpool, Lisa
Sent: Friday, July 11, 2014 8:37 AM
To: Stavnes, Sandra; Bahrman, Sarah
Cc: Smith, Paula; Mylott, Richard; Williams, Laura
Subject: ACTION: AP inquiry on ND - early deadline this AM

James MacPherson from AP would like to know -- I know the Tribe is the lead however --

- 1) Is EPA relying on the company responsible for the spill for testing? Or are we (or the tribe?) doing it independently?
- 2) Have we tested both upstream and down?
- 3) Have we tested the Missouri River? (He claims the state thinks it has reached the river).
- 4) If we've tested, what did we find? What is in it?

He has an early deadline on this -- so before noon --

I left a vmail for Pete Stevenson on his cell.

Lisa

Gordon, Stephanie

From: Ostrander, David
Sent: Wednesday, July 09, 2014 12:23 PM
To: Mylott, Richard
Subject: FW: Aero Pipeline leak near Mandaree, ND

From: Stevenson, Peter
Sent: Tuesday, July 08, 2014 2:01 PM
To: Romero, David; Williams, Laura; Ostrander, David
Subject: Aero Pipeline leak near Mandaree, ND

Phillip has concluded travel arrangements, I will fly tomorrow morning and get on site tomorrow afternoon. It was too late to catch the 3pm flight and the red eye would be brutal. I left a message for Chris Roberts of NDDOH. I talked with Don Butler, representing the RP. The valve leak is secured. The line carries condensate and brine off the reservation to a treatment plant, where the water is treated before re-injection. The saltwater flowed north into arroyos. The RP and their environmental emergency response contractor are on scene assessing the spill effects, and will vac up any remaining water. Booms and pads will or have been placed at the entry into the Lake. CaCl soil exchange may take place later. I will get on site and get up to speed on what the situation is and direct the RP as necessary. The RP sounds willing to do what I ask of them, including sampling. I will continue to contact local and state reps, including the Tribe, primarily the Three Affiliated Tribes Environmental Department. I have told START to stand down for now. I will provide updates as soon as I know anything more.

Gordon, Stephanie

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 2:01 PM
To: Mohr, Mindy; Mylott, Richard
Subject: FW: Bakken Team: FW: Ft. Berthold North Dakota Pipeline Spill Cleanup May Take Weeks - 1 million gallons of oil drilling saltwater

FYI in case you haven't seen this one

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Beeler, Cindy
Sent: Thursday, July 10, 2014 1:15 PM
To: Bahrman, Sarah; Belille, Jean; Bohan, Suzanne; Boomgaard, Craig; Cobb, David; Cody, Cynthia; Dehart, Matthew; Ehrig, Lance; Fronczak, David; Gieck, Stephanie; Giese, Andrea; Heimdal, Monica; Hoffman, Jocelyn; Hofstader, Olive; Huff, Blake; Kimbel, Curtis; Lamdin, Randy; Llamozas, Emilio; Matsumoto, Kimi; McComb, Martin; Merritt, Steven; Myers, Craig; North, Alexis; Payan, Melissa; Pfeiffer, Tricia; Pierre-Louis, Philippe; Platt, Amy; Roberts, Sarah; Schmit, Ayn; Smith, Claudia; South, Brenda; Urban, Candice; Wang, Gary; Wenstrom, Michael; Wortman, Eric
Cc: Atencio, Kathie; Campbell, Gwen; Darling, Corbin; Land, Kelcey; Martinez, Jeffrey; Minter, Douglas; Mitre, Alfreda; O'Connor, Darcy; Opekar, Kimberly; Ostrander, David; Palomares, Art; Pardue-Welch, Kimberly; Pearson, Janice; Reynolds, Cynthia; Urdiales, Aaron; Williams, Laura
Subject: Bakken Team: FW: Ft. Berthold North Dakota Pipeline Spill Cleanup May Take Weeks - 1 million gallons of oil drilling saltwater

Thanks Karen Hamilton and Jean Belille for sharing this info ...

Cindy Beeler
US EPA Region 8, Energy Advisor
Office of the Regional Administrator
Tel: 303-312-6204
Beeler.Cindy@epa.gov

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From: Hamilton, Karen
Sent: Thursday, July 10, 2014 12:48 PM
To: Brown, Randy; Ostrander, David; Spence, Sandra; Ott, Toney; Mitre, Alfreda; Beeler, Cindy; Pfeiffer, Tricia; Bloom, Judy
Subject: Ft. Berthold North Dakota Pipeline Spill Cleanup May Take Weeks - 1 million gallons of oil drilling saltwater

From: Frank [mailto:homebythehills@comcast.net]

Sent: Thursday, July 10, 2014 12:44 PM

To: homebythehills

Subject: Associated Press: North Dakota Pipeline Spill Cleanup May Take Weeks - 1 million gallons of oil drilling saltwater

North Dakota Pipeline Spill Cleanup May Take Weeks

<http://abcnews.go.com/US/wireStory/saltwater-pipeline-leaks-indian-reservation-24488733>

MANDAREE, N.D. — Jul 10, 2014, 11:21 AM ET

By JOSH WOOD and JAMES MacPHERSON Associated Press



A pipeline has leaked 1 million gallons of oil drilling saltwater into the ground at a North Dakota Indian reservation, and some of the byproduct ended up in a bay that feeds the lake that provides the reservation's drinking water, company and tribal officials said.

Cleanup at the Fort Berthold reservation site continued Thursday, two days after the leak was discovered. It was expected to last for weeks, said Miranda Jones, the vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Services Inc.

Jones said the leak at the underground pipeline, owned by Crestwood subsidiary Aero Pipeline LLC, likely started over the Fourth of July weekend. The pipeline was not equipped with a system that sends an alert when there is a leak, she said, and the spill was only discovered when the company was going through production loss reports.

"This is something no company wants on their record, and we are working diligently to clean it up," Jones said.

An unknown amount of the fluid entered Bear Den Bay. That bay leads to Lake Sakakawea, which provides water for the reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of western North Dakota's booming oil patch. But company and tribal officials said the spill has been contained and has not affected the lake.

"We have a berm and a dike around it, around that bay area, to keep it from going into the lake," said Three Affiliated Tribes Chairman Tex Hall.

Saltwater is a naturally occurring, unwanted byproduct of oil and natural gas production that is between 10 and 30 times saltier than sea water. The state considers it an environmental hazard.

The briny byproduct also may contain petroleum and residue from hydraulic fracturing operations.

Kris Roberts, an environmental geologist with the North Dakota Department of Health, said damage from the toxic spill could be seen when he visited the site on Tuesday.

7
"We've got dead trees, dead grasses, dead bushes, dying bushes," he said.

Karolin Rockvoy, a McKenzie County emergency manager, said it was apparent from looking at vegetation that the spill went undetected for some time.

The number of saltwater spills in North Dakota has grown with the state's soaring oil production. North Dakota produced 25.5 million barrels of brine in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

Fort Berthold Indian Reservation plays a key role in the state's oil production, the second-highest in the nation. The reservation currently represents more than 300,000 of North Dakota's 1 million barrels of oil produced daily, according to the state's Department of Mineral Resources.

In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed saltwater to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota's oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the brine is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

MacPherson reported from Bismarck, North Dakota.

Gordon, Stephanie

From: Romero, David
Sent: Wednesday, July 09, 2014 4:14 PM
To: Mylott, Richard
Subject: Fw: Brief update to richard mylott

Again fyi

From: Stevenson, Peter
Sent: Wednesday, July 9, 2014 4:11:12 PM
To: Romero, David
Subject: Re: Brief update to richard mylott

He should get ahold of gembrey@mhanation.com. The chairman has taken control of all press releases and other information that is leaving the site, including photos.

From: Romero, David
Sent: Wednesday, July 9, 2014 3:49:24 PM
To: Stevenson, Peter
Cc: Mylott, Richard; Williams, Laura
Subject: Brief update to richard mylott

Pete

If you get the chance and are able to give Richard Mylott a brief email/text/or voice mail describing the situation out there before the close of business today everyone would be deeply appreciative.

David Romero
Emergency Response Program
EPA Region 8
(303)312-6572

Gordon, Stephanie

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David Romero
Emergency Response Program
EPA Region 8
(303)312-6572

Gordon, Stephanie

From: Romero, David
Sent: Wednesday, July 09, 2014 4:07 PM
To: Mylott, Richard
Subject: Fw: Brief update to richard mylott

Fyi

From: Stevenson, Peter
Sent: Wednesday, July 9, 2014 3:57:22 PM
To: Romero, David
Subject: Re: Brief update to richard mylott

Give me a phone number

From: Romero, David
Sent: Wednesday, July 9, 2014 3:49:24 PM
To: Stevenson, Peter
Cc: Mylott, Richard; Williams, Laura
Subject: Brief update to richard mylott

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David Romero
Emergency Response Program
EPA Region 8
(303)312-6572

Gordon, Stephanie

From: Romero, David
Sent: Wednesday, July 09, 2014 4:18 PM
To: Mylott, Richard
Subject: Fw: Brief update to richard mylott

Fyi

From: Stevenson, Peter
Sent: Wednesday, July 9, 2014 4:14:55 PM
To: Romero, David
Subject: Re: Brief update to richard mylott

Get any existing water quality data for section19, t150 N, 94W asap from our water quality people. TJ McReynolds and Mickie Hartnett, who is the Tribe's technical assistance contact

From: Romero, David
Sent: Wednesday, July 9, 2014 3:49:24 PM
To: Stevenson, Peter
Cc: Mylott, Richard; Williams, Laura
Subject: Brief update to richard mylott

Pete

If you get the chance and are able to give Richard Mylott a brief email/text/or voice mail describing the situation out there before the close of business today everyone would be deeply appreciative.

David Romero
Emergency Response Program
EPA Region 8
(303)312-6572

Gordon, Stephanie

From: Mylott, Richard
Sent: Thursday, July 10, 2014 12:09 PM
To: apbismarck@ap.org
Subject: FW: EPA statement on brine spill

Please change reference in first sentence below to "Tribes." Thanks.

From: Mylott, Richard
Sent: Thursday, July 10, 2014 12:01 PM
To: 'apbismarck@ap.org'
Subject: EPA statement on brine spill

EPA is providing technical support to the Tribe as it leads assessment and cleanup activities at the spill site. There are several parties involved in response activities. The most recent spill estimate is 24,000 barrels of brine and condensate. The majority of the spill is pooled on the ground, soaked into the soil, and contained behind beaver dams in a nearby draw. The line has been shut down and steps have been taken to contain the discharge in the draw, including the placement of boom material at the mouth of the draw. Currently, the primary concern is the high salinity of the discharge and impacts on soil, vegetation and water in the draw. Cleanup efforts will focus on pumping and flushing water through a series of beaver ponds along the draw. We have no confirmed reports of brine reaching the bay or lake, however, additional assessment activity will take place today.

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To: 'apbismarck@ap.org'
Subject: EPA statement on brine spill

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Gordon, Stephanie

From: Mohr, Mindy
Sent: Thursday, July 10, 2014 8:59 AM
To: Bahrman, Sarah
Subject: FW: Fort Berthold water in the news

Hey Sarah, I sent your update to Kimberly and her folks just now.

This article says a million gallons, and that Aero is a subsidiary of Crestwood.

Mindy Mohr
Tribal Liaison
303-312-6525 or toll free 1-800-227-8917
mohr.mindy@epa.gov
FAX 1-877-876-9191

From: Merida, Mario
Sent: Thursday, July 10, 2014 8:55 AM
To: Giese, Andrea; Mohr, Mindy
Cc: Pardue-Welch, Kimberly
Subject: Fort Berthold water in the news

I just saw this report.

<http://www.nbcnews.com/#/news/us-news/million-gallons-saltwater-leaks-north-dakota-pipeline-n152451>

C

Any additional info?

Thanks!

Mario

Mario Mérida

Environmental Protection Specialist
Drinking Water Enforcement Team (8ENF-W)
U.S. Environmental Protection Agency - Region 8
1595 Wynkoop Street
Denver, CO 80202

Tel: 303-312-6297
Fax: 303-312-7518

Gordon, Stephanie

From: Stevenson, Peter
Sent: Tuesday, August 05, 2014 12:43 PM
To: Roos, Judy
Subject: FW: InsideClimate News: 'Saltwater' From North Dakota Fracking Spill Is Not What's Found in the Ocean

From: Stevenson, Peter
Sent: Friday, July 18, 2014 4:08 PM
To: Mylott, Richard; Ostrander, David; Williams, Laura; Hestmark, Martin; Stavnes, Sandra; Mitre, Alfreda; McGrath, Shaun; Card, Joan
Cc: Smith, Paula; McClain-Vanderpool, Lisa
Subject: RE: InsideClimate News: 'Saltwater' From North Dakota Fracking Spill Is Not What's Found in the Ocean

Well you can scratch #3 as this pipeline goes off the reservation to the central treatment plant, according to Crestwood. The view from the bluff where the pipeline valve ruptured included numerous tank batteries, active drilling operations, and oil production wells, upstream (up pipe?) of the leak. The particular 24,000 bbl reported lost may or may not be of the same composition than the brine/saltwater/produced water now being trucked to the treatment plant, while the pipeline in question is shut in. The Three Affiliated Tribes and Crestwood should have sampling data that would shed light on the contents of the spilled material.

From: Mylott, Richard
Sent: Friday, July 18, 2014 3:53 PM
To: Ostrander, David; Stevenson, Peter; Williams, Laura; Hestmark, Martin; Stavnes, Sandra; Mitre, Alfreda; McGrath, Shaun; Card, Joan
Cc: Smith, Paula; McClain-Vanderpool, Lisa
Subject: InsideClimate News: 'Saltwater' From North Dakota Fracking Spill Is Not What's Found in the Ocean

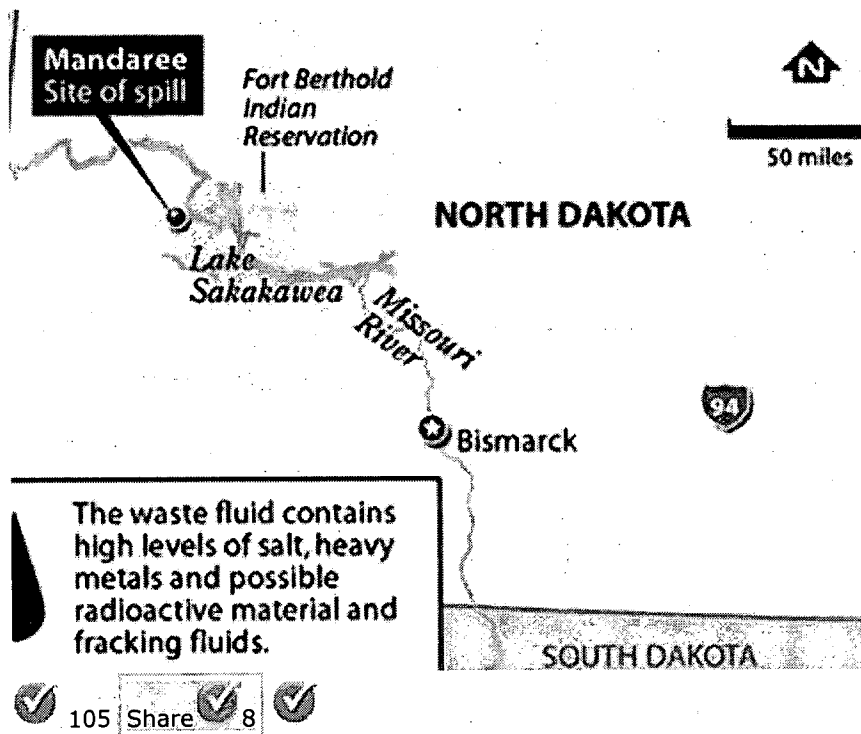
Fyi...

'Saltwater' From North Dakota Fracking Spill Is Not What's Found in the Ocean

The salty drilling waste is said to contain heavy metals in concentrations that might not meet drinking water standards, as well as radioactive material.

By Lisa Song, InsideClimate News

Jul 16, 2014



In early July, a million gallons of salty drilling waste spilled from a pipeline onto a steep hillside in western North Dakota's Fort Berthold Reservation. The waste—a byproduct of oil and gas production—has now reached a tributary of Lake Sakakawea, which provides drinking water to the reservation.

The oil industry called the accident a "saltwater" spill. But the liquid that entered the lake bears little resemblance to what's found in the ocean.

The industry's wastewater is five to eight times saltier than seawater, said Bill Kappel, a hydrogeologist emeritus at the U.S. Geological Survey. It's salty enough to sting the human tongue, and contains heavy metals in concentrations that might not meet drinking water standards. The briny mix can also include radioactive material. Heavy metals and radioactive materials are toxic at certain concentrations.

"You don't want to be drinking this stuff," Kappel said.

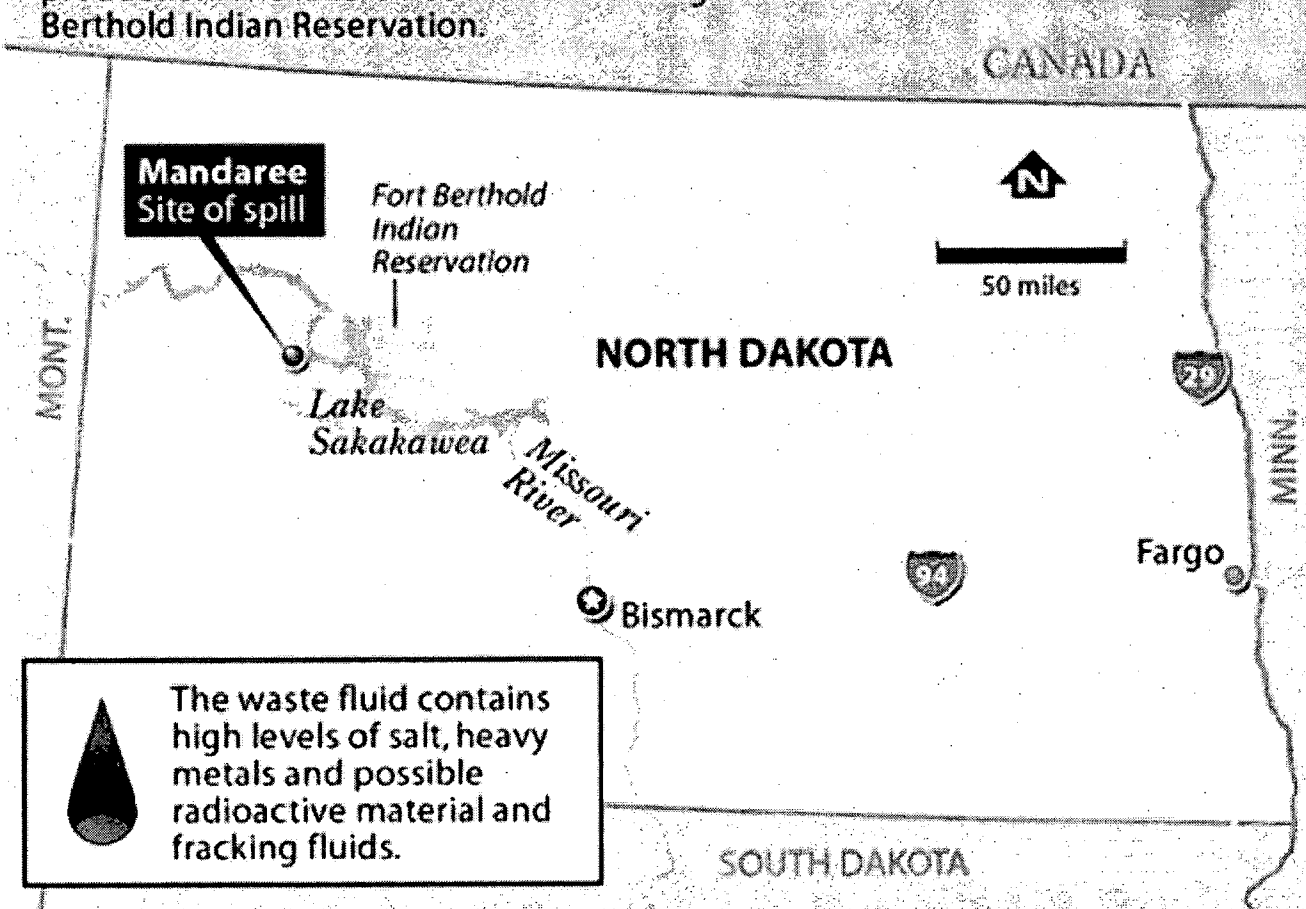
The North Dakota spill has killed vegetation and contaminated the soil, and cleanup crews are working on remediation and monitoring. In an email, a representative of Crestwood Midstream Partners—the parent company of Arrow Pipelines, the company responsible for the spill—said there is "no evidence of an impact to the local water supply."

Confusion persists over the wastewater's environmental and health effects because little is known about the composition of the spilled waste. The compounds it contains vary widely depending on local geology and drilling practices. And there are inconsistencies even within the industry over the definition of "saltwater," which may or may not contain hydraulic fracturing (fracking) fluids.

The "terms are used very loosely, probably on purpose," Kappel said.

Lake in Jeopardy

A million-gallon pipeline rupture is threatening to contaminate Lake Sakakawea with hazardous waste from oil and gas production. The lake is a source of drinking water for Fort Berthold Indian Reservation.



SOURCE: InsideClimate News research
enlarge

PAUL HORN / InsideClimate News [Click to](#)

Jim Ladlee, associate director of the Penn State Marcellus Center for Outreach and Research, said oilfield definitions vary by company, and the same operator may use different words for the same waste product in different parts of the country.

Both Ladlee and Kappel said it's impossible to understand the potential impact in North Dakota without additional information about what, exactly, was in the pipeline.

The Crestwood representative did not answer questions about the saltwater composition. Because the spill occurred on tribal land, Alison Ritter, a spokeswoman at the North Dakota Department of Mineral Resources, directed all questions to the Mandan, Hidatsa and Arikara Nation, which did not respond by deadline.

Here's what we do know:

The industry-coined term saltwater usually refers to three types of waste.

1.) The naturally occurring brines located in oil and gas formations hundreds or thousands of feet underground, known as produced water. The brines consist of water and dissolved chemicals leached from the surrounding rock. These include:

- Sodium and chloride (the compounds that make up table salt).

- Heavy metals such as chromium, cobalt, nickel, copper, zinc, arsenic, selenium, silver, cadmium, antimony, mercury, thallium and lead.
- Radioactive material from buried rock.
- Other dissolved compounds such as barium, calcium and bromide.

Once a well begins operating, produced water flows out of the wellbore along with the oil and/or gas. The mixture is separated at the surface, and the produced water is trucked or piped away for disposal through "saltwater pipelines."

2.) A mixture of produced water and fracking fluids, called flowback. Fracking fluids contain millions of gallons of water, millions of pounds of sand and thousands of gallons of chemical additives, some of which are toxic.

Flowback comes out of the well during the first two to three weeks after it's fracked. Like produced water, the flowback is shipped via pipeline for disposal in injection wells or waste pits.

3.) Produced water, which has been treated to remove almost everything but salt and is reused in the fracking process. Ladlee, the Marcellus Outreach representative, said produced water is sent to treatment plants, which remove most of the dissolved material except for the salt. The treated salty mixture is diluted with fresh water, and fracking chemicals are added to create a new batch of fracking fluid, which is used to frack another well. If the North Dakota pipeline was carrying fluid from a treatment facility to a well site for recycling, Ladlee said, then the saltwater would contain very salty water, but with few heavy metals and radioactive material.

The North Dakota spill caught media attention because it was unusually large. But smaller "saltwater" spills occur more frequently. According to the Associated Press, there were 74 such spills in North Dakota last year, spilling a total of 924,000 gallons.

InsideClimate News intern Hannah Robbins contributed to this story.

See Also

Gordon, Stephanie

From: Bahrman, Sarah
Sent: Friday, July 11, 2014 12:45 PM
To: R8 Drinking Water
Subject: FW: ND story

Latest article on the situation at Mandaree, ND on the Fort Berthold reservation. I expect to hear from the ND DOH lab later this afternoon with some preliminary results from raw water and finished water sampling. I'll share that info with you all as soon as it's available.

Thanks!

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: McClain-Vanderpool, Lisa
Sent: Friday, July 11, 2014 9:39 AM
To: McGrath, Shaun; Stavnes, Sandra
Cc: Bahrman, Sarah; Smith, Paula
Subject: ND story

See story below.

I'm currently working on responding to additional AP inquiry on the spill.

From: Mylott, Richard
Sent: Friday, July 11, 2014 9:00 AM
To: McClain-Vanderpool, Lisa
Subject: RE: ACTION: AP inquiry on ND - early deadline this AM

Fyi http://bismarcktribune.com/bakken/officials-no-evidence-brine-in-bay-after-north-dakota-spill/article_b87b7e84-0902-11e4-92c3-001a4bcf887a.html

Gordon, Stephanie

From: Mylott, Richard
Sent: Tuesday, July 22, 2014 2:41 PM
To: McClain-Vanderpool, Lisa
Subject: FW: Qs re: brine spill

Fyi.

From: Mylott, Richard
Sent: Thursday, July 17, 2014 1:36 PM
To: 'Wood, Joshua'
Subject: Qs re: brine spill

Hi Josh—hope below helps. The nature of EPA's roles and responsibilities are based on the specific circumstances associated with each spill. In this case, there were no indications of oil impacts to surface waters. The Tribe is the primary authority for spill response and the cleanup in areas of the drainage affected by brine water. I understand Glenda Baker Embry is the best contact for the Tribe.

Rich Mylott

-Did the EPA conduct its own air, water and soil tests at the scene of the site? Did the EPA conduct water tests in Lake Sakakawea and Bear Den Bay? If so, what did these tests show? If the EPA did not conduct these tests, did any independent body conduct these tests? By independent, I mean not Crestwood Midstream Partners LP or its subsidiary, nor a company they contracted nor somebody they recommended to the Three Affiliated Tribes.

No. The Tribe is the lead agency on the spill response and the best source for information related to sampling data. The lead response agency and responsible party are typically responsible for securing samples at spill sites. My understanding is that samples taken near drinking water intakes showed no indication of hydrocarbons or impacts from brine. I understand some samples were tested at a state lab, but you should confirm with the Tribe as they are lead. I also understand samples were taken at several locations; the Tribe will have specifics.

-What jurisdiction does the EPA have over of spills on reservations?

EPA investigates spills reported to the U.S. Coast Guard's National Response Center and provides support to state, tribal and local authorities as appropriate. EPA's primary role under our authorities is to ensure appropriate response actions are taken when 1.) oil spills threaten or impact surface waters or 2.) releases of hazardous substances pose an immediate and substantial threat to human health. Our specific roles as a lead or supporting agency also depend on the extent of state, tribal and local response capabilities. In this case, the spill involved brine water and there was no oil observed in the drainage leading to the bay or in the bay itself. As such, our roles were limited to an initial assessment and the provision of support to the Tribe as lead.

-I know that the state of North Dakota and the counties do not have jurisdiction over these kinds of spills. Are all spills on tribal lands reported to the EPA? If not, what kinds of spills do as far as size, location etc?

Yes. Oil and hazardous material spills with the potential to impact surface waters are reported to the U.S. Coast Guard's National Response Center, which notifies the appropriate EPA region. There is a reportable quantity for spills/discharges which varies by chemical. For oil, the reportable quantity is a sheen on water.

-What did the EPA observe on the scene? Can you provide any reports filed about the incident?

EPA inspected the spill site and walked the length of the drainage. There were no signs of oil contamination along the spill flow path into the drainage below. There were no signs of oil in the drainage, in the beaver ponds, or below. There were no signs of oil on water at Bear Den Bay, or along the shoreline of the bay.

-The last statement I got from your office said the EPA was still investigating the extent of brine contamination.

Did brine get into Lake Sakakawea or the Bear Den Bay?

EPA observed no evidence of impacts to the bay or the lake, however the Tribe will be the best source for information.

Do we have figures on how much ground was affected by the spill and how much vegetation was killed off? Was wildlife affected?

The cleanup of the affected drainage is the Tribe's responsibility. The Tribe would be primary source for specifics related to the scope of impacts. The brine water did affect vegetation in the drainage and was held up in a series of beaver ponds.

-When was the EPA first notified of the Mandaree spill? Who notified the agency?

The company made a report to the NRC on July 8 at 13:16.

-Crestwood Midstream Partners LP estimates the cleanup will take weeks. A spill of a similar size occurred near the town of Alexander, North Dakota in 2006 and was still being cleaned up as of last week. Does the EPA concur with Crestwood's estimated clean-up timeline?

The cleanup of the drainage is the Tribe's responsibility. The Tribe will be the best source for specific cleanup requirements and estimates on how long actions will take.

-How does saltwater impact the environment? Particularly what does it do to soil, vegetation etc that it comes in contact with?

Saltwater contains high concentrations of dissolved solids that can be toxic to vegetation and aquatic organisms. It can also make water unsuitable for drinking.

-What challenges does cleaning up brine pose? Are there specific challenges with this spill? Has the EPA made recommendations on how to proceed?

The Tribe is responsible for the cleanup of the drainage. The primary concern will be flushing the drainage with fresh water and helping vegetation recover. Precipitation is also a factor in diluting concentrations in soils and helping with recovery.

Gordon, Stephanie

From: Mylott, Richard
Sent: Tuesday, July 22, 2014 2:41 PM
To: McClain-Vanderpool, Lisa
Subject: FW: Qs re: brine spill

Fyi.

From: Mylott, Richard
Sent: Thursday, July 17, 2014 1:36 PM
To: 'Wood, Joshua'
Subject: Qs re: brine spill

Hi Josh—hope below helps. The nature of EPA's roles and responsibilities are based on the specific circumstances associated with each spill. In this case, there were no indications of oil impacts to surface waters. The Tribe is the primary authority for spill response and the cleanup in areas of the drainage affected by brine water. I understand Glenda Baker Embry is the best contact for the Tribe.

Rich Mylott

-Did the EPA conduct its own air, water and soil tests at the scene of the site? Did the EPA conduct water tests in Lake Sakakawea and Bear Den Bay? If so, what did these tests show? If the EPA did not conduct these tests, did any independent body conduct these tests? By independent, I mean not Crestwood Midstream Partners LP or its subsidiary, nor a company they contracted nor somebody they recommended to the Three Affiliated Tribes.

No. The Tribe is the lead agency on the spill response and the best source for information related to sampling data. The lead response agency and responsible party are typically responsible for securing samples at spill sites. My understanding is that samples taken near drinking water intakes showed no indication of hydrocarbons or impacts from brine. I understand some samples were tested at a state lab, but you should confirm with the Tribe as they are lead. I also understand samples were taken at several locations; the Tribe will have specifics.

-What jurisdiction does the EPA have over of spills on reservations?

EPA investigates spills reported to the U.S. Coast Guard's National Response Center and provides support to state, tribal and local authorities as appropriate. EPA's primary role under our authorities is to ensure appropriate response actions are taken when 1.) oil spills threaten or impact surface waters or 2.) releases of hazardous substances pose an immediate and substantial threat to human health. Our specific roles as a lead or supporting agency also depend on the extent of state, tribal and local response capabilities. In this case, the spill involved brine water and there was no oil observed in the drainage leading to the bay or in the bay itself. As such, our roles were limited to an initial assessment and the provision of support to the Tribe as lead.

-I know that the state of North Dakota and the counties do not have jurisdiction over these kinds of spills. Are all spills on tribal lands reported to the EPA? If not, what kinds of spills do as far as size, location etc?

Yes. Oil and hazardous material spills with the potential to impact surface waters are reported to the U.S. Coast Guard's National Response Center, which notifies the appropriate EPA region. There is a reportable quantity for spills/discharges which varies by chemical. For oil, the reportable quantity is a sheen on water.

-What did the EPA observe on the scene? Can you provide any reports filed about the incident?

EPA inspected the spill site and walked the length of the drainage. There were no signs of oil contamination along the spill flow path into the drainage below. There were no signs of oil in the drainage, in the beaver ponds, or below. There were no signs of oil on water at Bear Den Bay, or along the shoreline of the bay.

-The last statement I got from your office said the EPA was still investigating the extent of brine contamination.

Did brine get into Lake Sakakawea or the Bear Den Bay?

EPA observed no evidence of impacts to the bay or the lake, however the Tribe will be the best source for information.

Do we have figures on how much ground was affected by the spill and how much vegetation was killed off? Was wildlife affected?

The cleanup of the affected drainage is the Tribe's responsibility. The Tribe would be primary source for specifics related to the scope of impacts. The brine water did affect vegetation in the drainage and was held up in a series of beaver ponds.

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Gordon, Stephanie

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 12:55 PM
To: Palomares, Art; Pardue-Welch, Kimberly
Subject: Fw: UPDATE: Mandaree, ND Drinking Water

Here's the second. I'll keep you posted.

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 12:23:01 PM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Thomas, Deb; Videtich, Callie; Hoskie, Sadie
Subject: UPDATE: Mandaree, ND Drinking Water

Quick Update:

According to Pete Stevenson, the Army Corps of Engineers was out on the lake in the area of the intake to the Mandaree water plant and did not notice any visible sheen or other indicators that contamination had reached the water plant. As a precautionary measure, the water operators have collected samples from the area around the intake and from the treated water and will test for diesel range organics, sodium (as an indicator of total dissolved solids or brine), metals, and radiologicals. Samples are at the state lab in Bismarck and we should get some preliminary results later today.

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Mylott, Richard
Sent: Thursday, July 10, 2014 9:38 AM
To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin
Subject: UPDATED AP: Saltwater leak alters water supply for 1 ND town

Fyi. Pete Stevenson is on-scene.

Estimated 1M gallons of saltwater leaks in ND bay

By Associated Press July 9 at 7:54 PM

MANDAREE, N.D. — Around 1 million gallons of saltwater spilled into a North Dakota bay, causing some environmental damage but sparing a nearby lake that provides drinking water for an American Indian reservation, company and tribe officials said Wednesday.

Three Affiliated Tribes Chairman Tex Hall told The Associated Press that an underground pipeline near Mandaree leaked about 24,000 barrels of brine into Bear Den Bay, a tributary to Lake Sakakawea. That

Missouri River reservoir provides water to communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water. At least some damage to trees, bushes and grass was reported, but the extent wasn't immediately clear.

Miranda Jones, vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Services Inc., whose subsidiary Aero Pipeline LLC owns the pipeline, said the leak likely started over the weekend but wasn't discovered until Tuesday. The pipeline is not equipped with a system that sends an alert when there's a leak, she said.

"This is something that no company wants on their record, and we are working diligently to clean it up," Jones said.

Tribal leaders switched to an alternative source of water Wednesday but were again tapping Lake Sakakawea after concluding the contamination was limited to the bay, Hall said.

An investigator with the federal Environmental Protection Agency arrived Wednesday at the site.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said damage from the toxic spill could be seen Wednesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," Roberts said.

Karolin Rockvov, a McKenzine County Emergency manager, said the spill appeared to have gone undetected for some time.

"Looking at vegetation, it didn't happen yesterday," she said. "I can guarantee you that."

The number of saltwater spills in North Dakota has grown with the state's soaring oil production.

North Dakota produced 25.5 million barrels of brine in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of the saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed saltwater to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota's oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the brine is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

MacPherson reported from Bismarck, N.D.

From: Mylott, Richard

Sent: Wednesday, July 09, 2014 4:27 PM

To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin

Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

Saltwater leak alters water supply for 1 ND town

By Associated Press July 9 at 5:31 PM

MANDAREE, N.D. — Tribal leaders switched to an alternative source of water Wednesday for one town on an American Indian reservation in North Dakota following a substantial leak from a saltwater pipeline.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said the spill was reported Tuesday but officials did not have any information on volumes or if the brine had reached Bear Den Bay, a tributary to Lake Sakakawea. The lake, a reservoir of the Missouri River, provides drinking water to several communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water. Three Affiliated Tribes Chairman Tex Hall said in a statement that "there are no specific concerns over the water safety" but that tribal officials closed the water intake to Mandaree as a precaution without elaborating on what steps were taken. Hall said the briny water did not appear to have reached Lake Sakakawea.

Houston-based Crestwood Midstream Services Inc., owner of the pipeline, said in a statement Wednesday that the spill was contained and cleanup was underway. The company said it was investigating the cause of the leak but would not comment beyond its statement.

The federal Environmental Protection Agency said an investigator was heading to the site Wednesday afternoon.

Roberts said damage from the toxic spill could be seen Wednesday.

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Gordon, Stephanie

From: Mylott, Richard
Sent: Thursday, July 10, 2014 1:58 PM
To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Stavnes, Sandra
Subject: Link to TAT news release on spill

<https://www.facebook.com/NorthSegmentOfTheThreeAffiliatedTribes/photos/a.464307356975217.1073741826.448088225263797/702940339778583/?type=1&theater>

From: Mylott, Richard
Sent: Thursday, July 10, 2014 1:42 PM
To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Stavnes, Sandra
Subject: AP: EPA Trying to Confirm ND Spill Didn't Reach Lake

EPA Trying to Confirm ND Spill Didn't Reach Lake

MANDAREE, N.D. — Jul 10, 2014, 3:35 PM ET
By JOSH WOOD and JAMES MacPHERSON Associated Press

AP

Officials are assessing a spill of oil-drilling saltwater from a North Dakota pipeline to ensure none of the brine affected the lake an American Indian reservation uses for drinking water, the Environmental Protection Agency said Thursday.

In its first public statement in the two days since the spill was detected, the agency said it had no confirmed reports that the saltwater had reached Bear Den Bay. It leads to Lake Sakakawea, which provides water for the Fort Berthold reservation occupied by the Mandan, Hidatsa and Arikara tribes in the heart of western North Dakota's booming oil patch.

EPA said most of the spill was pooled on the ground, soaked into the soil and held behind beaver dams. It said the leak involved an estimated 24,000 barrels, or 1 million gallons, of saltwater and condensate, which are byproducts of oil and gas production.

Cleanup at the reservation site continued Thursday and was expected to last for weeks, said Miranda Jones, the vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Partners Inc.

Jones said the leak at the underground pipeline, owned by Crestwood subsidiary Arrow Pipeline LLC, likely started over the Fourth of July weekend. The pipeline was not equipped with a system that sends an alert when there is a leak, she said, and the spill was only discovered when the company was going through production loss reports.

"This is something no company wants on their record, and we are working diligently to clean it up," Jones said.

Although the EPA said additional assessment activity was being conducted, company and tribal officials said the spill had been contained and did not affect the lake.

"We have a berm and a dike around it, around that bay area, to keep it from going into the lake," said Three Affiliated Tribes Chairman Tex Hall.

Saltwater is a naturally occurring, unwanted byproduct of oil and natural gas production that is between 10 and 30 times saltier than sea water. The state considers it an environmental hazard.

The briny byproduct also may contain petroleum and residue from hydraulic fracturing operations.

Kris Roberts, an environmental geologist with the North Dakota Department of Health, said damage from the toxic spill could be seen when he visited the site on Tuesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," he said.

Karolin Rockvoy, a McKenzie County emergency manager, said it was apparent from looking at vegetation that the spill went undetected for some time.

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Fort Berthold Indian Reservation plays a key role in the state's oil production, the second-highest in the nation. The reservation currently represents more than 300,000 of North Dakota's 1 million barrels of oil produced daily, according to the state's Department of Mineral Resources.

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Gordon, Stephanie

From: Card, Joan
Sent: Thursday, July 10, 2014 8:18 AM
To: Bahrman, Sarah; Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Videtich, Callie; Thomas, Deb; Hoskie, Sadie
Subject: RE: AP: Saltwater leak alters water supply for 1 ND town

Thanks for that information Sarah.

Joan Card | Senior Policy Advisor
Office of the Regional Administrator
USEPA Region 8 (CO, MT, ND, SD, UT, WY)
1595 Wynkoop Street | Denver, CO 80202
(303) 312-6468 | card.joan@epa.gov

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 8:10 AM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Videtich, Callie; Thomas, Deb; Hoskie, Sadie
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Hi all –

Jack Sorum, a drinking water treatment engineer with Indian Health Service, is on site in Mandaree this morning to evaluate the impact to the drinking water intake, what samples have been or should be collected in that area, and the status of the water supply. Jack has Pete Stevenson's cell phone number so they can coordinate.

I will plan to send an update later this morning once we have more information. Please let me know if you have any questions.

Thanks,
Sarah

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

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To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin
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Fyi.

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The number of saltwater spills in North Dakota has grown with the state’s soaring oil production.

North Dakota produced 25.5 million barrels of briny water in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of the saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed briny water to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota’s oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the briny water is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

Gordon, Stephanie

From: Williams, Laura
Sent: Wednesday, July 09, 2014 4:30 PM
To: Mylott, Richard
Subject: RE: AP: Saltwater leak alters water supply for 1 ND town

Thanks Richard. We're still waiting to hear from Pete and have sent him an email asking him to contact you ASAP. Apparently, he's out of cell tower range as our calls have gone immediately to "not in service" messages. - lw

From: Mylott, Richard
Sent: Wednesday, July 09, 2014 4:27 PM
To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin
Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

Saltwater leak alters water supply for 1 ND town

By Associated Press July 9 at 5:31 PM

MANDAREE, N.D. — Tribal leaders switched to an alternative source of water Wednesday for one town on an American Indian reservation in North Dakota following a substantial leak from a saltwater pipeline.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said the spill was reported Tuesday but officials did not have any information on volumes or if the brine had reached Bear Den Bay, a tributary to Lake Sakakawea. The lake, a reservoir of the Missouri River, provides drinking water to several communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water.

Three Affiliated Tribes Chairman Tex Hall said in a statement that "there are no specific concerns over the water safety" but that tribal officials closed the water intake to Mandaree as a precaution without elaborating on what steps were taken. Hall said the briny water did not appear to have reached Lake Sakakawea.

Houston-based Crestwood Midstream Services Inc., owner of the pipeline, said in a statement Wednesday that the spill was contained and cleanup was underway. The company said it was investigating the cause of the leak but would not comment beyond its statement.

The federal Environmental Protection Agency said an investigator was heading to the site Wednesday afternoon.

Roberts said damage from the toxic spill could be seen Wednesday.

“We’ve got dead trees, dead grasses, dead bushes, dying bushes,” Roberts said.

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Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

Gordon, Stephanie

From: Card, Joan
Sent: Thursday, July 10, 2014 8:18 AM
To: Bahrman, Sarah; Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Videtich, Callie; Thomas, Deb; Hoskie, Sadie
Subject: RE: AP: Saltwater leak alters water supply for 1 ND town

Thanks for that information Sarah.

Joan Card | Senior Policy Advisor
Office of the Regional Administrator
USEPA Region 8 (CO, MT, ND, SD, UT, WY)
1595 Wynkoop Street | Denver, CO 80202
(303) 312-6468 | card.joan@epa.gov

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 8:10 AM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Videtich, Callie; Thomas, Deb; Hoskie, Sadie
Subject: RE: AP: Saltwater leak alters water supply for 1 ND town

Hi all –

Jack Sorum, a drinking water treatment engineer with Indian Health Service, is on site in Mandaree this morning to evaluate the impact to the drinking water intake, what samples have been or should be collected in that area, and the status of the water supply. Jack has Pete Stevenson's cell phone number so they can coordinate.

I will plan to send an update later this morning once we have more information. Please let me know if you have any questions.

Thanks,
Sarah

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Mylott, Richard
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To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin
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Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

Gordon, Stephanie

From: Stevenson, Peter
Sent: Wednesday, July 09, 2014 5:04 PM
To: Mylott, Richard
Subject: Re: Brief update to richard mylott

The Tribe is controlling everything. The ap guy knows I am here, but I can't talk to him without clearance. I am not seeing any evidence of oil

From: Mylott, Richard
Sent: Wednesday, July 9, 2014 4:21:48 PM
To: Romero, David; Stevenson, Peter
Cc: Williams, Laura
Subject: RE: Brief update to richard mylott

Thanks all. Does that mean that the Tribe is overseeing the response? Have they issued anything in terms of a release yet?

Peter, I don't need anything official, just some basics for an AP reporter on an initial assessment of status, next steps, impacts to water resources. They may show up on site so you may interact with them there. I can wait til the initial pol rep if that is easier...

Rich
303-312-6654

From: Romero, David
Sent: Wednesday, July 09, 2014 4:14 PM
To: Mylott, Richard
Subject: Fw: Brief update to richard mylott

Again fyi

From: Stevenson, Peter
Sent: Wednesday, July 9, 2014 4:11:12 PM
To: Romero, David
Subject: Re: Brief update to richard mylott

He should get ahold of gembrey@mhanation.com. The chairman has taken control of all press releases and other information that is leaving the site, including photos.

From: Romero, David
Sent: Wednesday, July 9, 2014 3:49:24 PM
To: Stevenson, Peter
Cc: Mylott, Richard; Williams, Laura
Subject: Brief update to richard mylott

Pete
If you get the chance and are able to give Richard Mylott a brief email/text/or voice mail describing the situation out there before the close of business today everyone would be deeply appreciative.

David Romero
Emergency Response Program
EPA Region 8
(303)312-6572

Gordon, Stephanie

From: Brogden, Rose on behalf of Group R8Eisc <R8Eisc@epamail.epa.gov>
Sent: Friday, July 11, 2014 1:59 PM
To: Melinda Bolton
Cc: Group R8Eisc; Mylott, Richard; McClain-Vanderpool, Lisa
Subject: Re: Mandaree Salt Water Spill

Hello,

Your email reached the US EPA Region 8 Environmental Information Service Center (EISC). The press contacts for the information you are requesting are Richard Mylott and Lisa McClain-Vanderpool. You may wish to contact either for guidance regarding your email.

mylott.richard@epa.gov
(303) 312-6654

mcclain-vanderpool.lisa@epa.gov
(303) 312-7077

Thank you for your interest in the environment.

✉ "Melinda Bolton" ---07/11/2014 12:54:04 PM---Hoping I copied your e-mail address from your calling system correctly!
... Good afternoon,

From: "Melinda Bolton" <mbolton@kxnet.com>
To: Group R8Eisc/OCP/R8/USEPA/US@EPA
Date: 07/11/2014 12:54 PM
Subject: Mandaree Salt Water Spill

Hoping I copied your e-mail address from your calling system correctly!

... Good afternoon,

My name is Melinda Bolton and I am a reporter for KXMC in Minot, ND. I was out in the oil fields yesterday covering the brine spill near Mandaree, ND. I don't need a confirmation of the oil spill, as we already have that... but I would greatly appreciate an update on the water conditions. Particularly, if you have done any further testing. In addition an update on the remediation process in general would be appreciated as well.

If you can return the message by phone, that would be preferable. The general number for the news room is (701) 852-2104. That line will only go unanswered between 6 and 6:30 (Central) and 10 and 10:30 Central. At any other time there will be someone available. E-mail is great too, you can reply to kvolk@kxnet.com, to our evening anchor Kelli... or to jolson@kxmcnews.com our news director, Jim.

Thanks for your time,

Melinda

Gordon, Stephanie

From: Brogden, Rose on behalf of Group R8Eisc <R8Eisc@epamail.epa.gov>
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Thanks for your time,

Melinda

Gordon, Stephanie

From: Emily Guerin <eguerin@prairiepublic.org>
Sent: Thursday, July 10, 2014 1:51 PM
To: Mylott, Richard
Subject: Re: Reporter with questions on saltwater pipeline spill on Ft. Berthold

Also the tribe says the spill did reach the bay and they're sucking up the saltwater with vacuum pumps (see [this news release](#)). Can you confirm that?

On Thu, Jul 10, 2014 at 2:49 PM, Emily Guerin <eguerin@prairiepublic.org> wrote:
Ok great. When you saw draw, what exactly do you mean? Small stream?

On Thu, Jul 10, 2014 at 2:36 PM, Mylott, Richard <Mylott.Richard@epa.gov> wrote:

Hi Emily, the Tribes will be the best source for current information. Here's what I have in terms of status from early this am.

EPA is providing technical support to the Tribes as they lead assessment and cleanup activities at the spill site. There are several parties involved in response activities. The most recent spill estimate is 24,000 barrels of brine and condensate. The majority of the spill is pooled on the ground, soaked into the soil, and contained behind beaver dams in a nearby draw. The line has been shut down and steps have been taken to contain the discharge in the draw, including the placement of boom material at the mouth of the draw. Currently, the primary concern is the high salinity of the discharge and impacts on soil, vegetation and water in the draw. Cleanup efforts will focus on pumping and flushing fresh water through a series of beaver ponds along the draw. We have no confirmed reports of brine reaching the bay or lake, however, additional assessments are taking place today.

Rich Mylott

USEPA

303-312-6654

From: Emily Guerin [mailto:eguerin@prairiepublic.org]
Sent: Thursday, July 10, 2014 10:20 AM
To: Mylott, Richard
Subject: Reporter with questions on saltwater pipeline spill on Ft. Berthold

Hi Richard,

I'm a reporter with Prairie Public and I'm trying to find out more about the saltwater pipeline spill on the Ft. Berthold reservation in North Dakota. Please give me a call as soon as possible at 701-224-1700 ext. 220.

Thanks,

Emily

--

Emily Guerin

North Dakota Energy Reporter

Inside Energy | Prairie Public Broadcasting

701.224.1700 ext.220 (o)

207.798.9505 (c)

@guerinemily | @InsideEnergyNow

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Gordon, Stephanie

From: Emily Guerin <eguerin@prairiepublic.org>
Sent: Thursday, July 10, 2014 1:50 PM
To: Mylott, Richard
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North Dakota Energy Reporter
Inside Energy | Prairie Public Broadcasting

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Gordon, Stephanie

From: Mylott, Richard
Sent: Thursday, July 10, 2014 2:02 PM
To: Emily Guerin
Subject: RE: Reporter with questions on saltwater pipeline spill on Ft. Berthold

I haven't received a recent update. The Tribe is lead and will be primary source for information.

From: Emily Guerin [mailto:eguerin@prairiepublic.org]
Sent: Thursday, July 10, 2014 1:51 PM
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Gordon, Stephanie

From: Romero, David
Sent: Thursday, July 10, 2014 12:15 PM
To: Pfeiffer, Tricia
Cc: Bahrman, Sarah; Oberley, Gregory; Yersak, Thomas
Subject: RE: spill in Bear Den Creek

The NRC report marks the location lat/long at: 47 47' 05" N/ 102 38' 38" W. I don't know whether this has been verified.

From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 11:59 AM
To: Romero, David
Cc: Bahrman, Sarah; Oberley, Gregory; Yersak, Thomas
Subject: FW: spill in Bear Den Creek

Hey David,

Ostrander suggested I contact you...we would like to get the Lat/Longs for the spill location on Bear Den Creek.

--t

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
Fax: (303) 312-7150

<http://www.epa.gov/region8/ecosystems/>

US EPA Region 8
1595 Wynkoop Street
Mail Code 8EP-EPR
Denver, Colorado 80202

This transmission may contain deliberative, attorney-client, attorney work product or otherwise privileged material. Do not release under FOIA without appropriate review. If this message has been received by you in error, you are instructed to delete this message from your machine and all storage media whether electronic or hard copy.

From: Ostrander, David
Sent: Thursday, July 10, 2014 11:57 AM
To: Pfeiffer, Tricia
Subject: Re: spill in Bear Den Creek

Talk to david romero. I am out today on leave.

From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 11:16:41 AM
To: Ostrander, David

Cc: Bahrman, Sarah
Subject: spill in Bear Den Creek



David,

Do you have the Lat/Long data for where the spill occurred? If so, can you provide it to both Sarah and I ☺

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
Fax: (303) 312-7150

<http://www.epa.gov/region8/ecosystems/>

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Gordon, Stephanie

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 12:53 PM
To: Hoskie, Sadie
Subject: Re: UPDATE: Mandaree, ND Drinking Water

Will do - sorry for the oversight.

From: Hoskie, Sadie
Sent: Thursday, July 10, 2014 12:39:30 PM
To: Bahrman, Sarah
Subject: Re: UPDATE: Mandaree, ND Drinking Water

Thanks Sarah. Can you add Art and Kimberly as well to your updates. Thanks.

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 12:23:01 PM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Thomas, Deb; Videtich, Callie; Hoskie, Sadie
Subject: UPDATE: Mandaree, ND Drinking Water

Quick Update:

According to Pete Stevenson, the Army Corps of Engineers was out on the lake in the area of the intake to the Mandaree water plant and did not notice any visible sheen or other indicators that contamination had reached the water plant. As a precautionary measure, the water operators have collected samples from the area around the intake and from the treated water and will test for diesel range organics, sodium (as an indicator of total dissolved solids or brine), metals, and radiologicals. Samples are at the state lab in Bismarck and we should get some preliminary results later today.

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Mylott, Richard
Sent: Thursday, July 10, 2014 9:38 AM
To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin
Subject: UPDATED AP: Saltwater leak alters water supply for 1 ND town

Fyi. Pete Stevenson is on-scene.

Estimated 1M gallons of saltwater leaks in ND bay

By Associated Press July 9 at 7:54 PM

MANDAREE, N.D. — Around 1 million gallons of saltwater spilled into a North Dakota bay, causing some environmental damage but sparing a nearby lake that provides drinking water for an American Indian reservation, company and tribe officials said Wednesday.

Three Affiliated Tribes Chairman Tex Hall told The Associated Press that an underground pipeline near Mandaree leaked about 24,000 barrels of brine into Bear Den Bay, a tributary to Lake Sakakawea. That Missouri River reservoir provides water to communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water. At least some damage to trees, bushes and grass was reported, but the extent wasn't immediately clear.

Miranda Jones, vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Services Inc., whose subsidiary Aero Pipeline LLC owns the pipeline, said the leak likely started over the weekend but wasn't discovered until Tuesday. The pipeline is not equipped with a system that sends an alert when there's a leak, she said.

"This is something that no company wants on their record, and we are working diligently to clean it up," Jones said.

Tribal leaders switched to an alternative source of water Wednesday but were again tapping Lake Sakakawea after concluding the contamination was limited to the bay, Hall said.

An investigator with the federal Environmental Protection Agency arrived Wednesday at the site.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said damage from the toxic spill could be seen Wednesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," Roberts said.

Karolin Rockvov, a McKenzine County Emergency manager, said the spill appeared to have gone undetected for some time.

"Looking at vegetation, it didn't happen yesterday," she said. "I can guarantee you that."

The number of saltwater spills in North Dakota has grown with the state's soaring oil production.

North Dakota produced 25.5 million barrels of brine in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of the saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed saltwater to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota's oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the brine is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

MacPherson reported from Bismarck, N.D.

From: Mylott, Richard

Sent: Wednesday, July 09, 2014 4:27 PM

To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin

Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

Saltwater leak alters water supply for 1 ND town

By Associated Press July 9 at 5:31 PM

MANDAREE, N.D. — Tribal leaders switched to an alternative source of water Wednesday for one town on an American Indian reservation in North Dakota following a substantial leak from a saltwater pipeline.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said the spill was reported Tuesday but officials did not have any information on volumes or if the brine had reached Bear Den Bay, a tributary to Lake Sakakawea. The lake, a reservoir of the Missouri River, provides drinking water to several communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water. Three Affiliated Tribes Chairman Tex Hall said in a statement that "there are no specific concerns over the water safety" but that tribal officials closed the water intake to Mandaree as a precaution without elaborating on what steps were taken. Hall said the briny water did not appear to have reached Lake Sakakawea.

Houston-based Crestwood Midstream Services Inc., owner of the pipeline, said in a statement Wednesday that the spill was contained and cleanup was underway. The company said it was investigating the cause of the leak but would not comment beyond its statement.

The federal Environmental Protection Agency said an investigator was heading to the site Wednesday afternoon.

Roberts said damage from the toxic spill could be seen Wednesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," Roberts said.

Karolin Rockvoy, a McKenzine County Emergency manager, said the spill appeared to have gone undetected for some time.

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Gordon, Stephanie

From: Wood, Joshua <JoWood@ap.org>
Sent: Wednesday, July 16, 2014 1:21 PM
To: Mylott, Richard
Subject: RE: your call

Hi Rich,

Thanks for getting back to me. I'm trying to get more information about this pipeline spill near Mandaree, North Dakota that occurred in early July. I'm trying to get as much information as possible. Any updates you have collected would be appreciated and I have quite a few specific questions:

-Did the EPA conduct its own air, water and soil tests at the scene of the site? Did the EPA conduct water tests in Lake Sakakawea and Bear Den Bay? If so, what did these tests show? If the EPA did not conduct these tests, did any independent body conduct these tests? By independent, I mean not Crestwood Midstream Partners LP or its subsidiary, nor a company they contracted nor somebody they recommended to the Three Affiliated Tribes.

-What jurisdiction does the EPA have over of spills on reservations?

-I know that the state of North Dakota and the counties do not have jurisdiction over these kinds of spills. Are all spills on tribal lands reported to the EPA? If not, what kinds of spills do as far as size, location etc?

-What did the EPA observe on the scene? Can you provide any reports filed about the incident?

-The last statement I got from you office said the EPA was still investigating the extent of brine contamination. Did brine get into Lake Sakakawea or the Bear Den Bay? Do we have figures on how much ground was affected by the spill and how much vegetation was killed off? Was wildlife affected?

-When was the EPA first notified of the Mandaree spill? Who notified the agency?

-Is the EPA still on site?

-Crestwood Midstream Partners LP estimates the clean up will take weeks. A spill of a similar size occurred near the town of Alexander, North Dakota in 2006 and was still being cleaned up as of last week. Does the EPA concur with Crestwood's estimated clean-up timeline?

-How does saltwater impact the environment? Particularly what does it do to soil, vegetation etc that it comes in contact with?

-What challenges does cleaning up brine pose? Are there specific challenges with this spill? Has the EPA made recommendations on how to proceed?

Thanks, and hope to hear back from you soon.

Best,
Josh

From: Mylott, Richard [mailto:Mylott.Richard@epa.gov]
Sent: Wednesday, July 16, 2014 2:01 PM
To: Wood, Joshua
Subject: your call

Josh—I'm working out of the office today, but checking mail periodically. Let me know how I can help. Thanks!

Rich Mylott

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[IP_US_DISC]

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Gordon, Stephanie

From: Wood, Joshua <JoWood@ap.org>
Sent: Thursday, July 17, 2014 9:09 AM
To: Mylott, Richard
Subject: RE: your call

Thanks Rich.

From: Mylott, Richard [mailto:Mylott.Richard@epa.gov]
Sent: Wednesday, July 16, 2014 5:12 PM
To: Wood, Joshua
Subject: RE: your call

Josh—thanks, I'll work on these.

From: Wood, Joshua [mailto:JoWood@ap.org]
Sent: Wednesday, July 16, 2014 1:21 PM
To: Mylott, Richard
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[IP_US_DISC]

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Gordon, Stephanie

From: McDonald, Brent <mcdonaldb@nytimes.com>
Sent: Tuesday, July 29, 2014 11:23 AM
To: McClain-Vanderpool, Lisa
Subject: Re:

Lisa, thanks so much for the quick send.

Brent

On Tue, Jul 29, 2014 at 11:53 AM, McClain-Vanderpool, Lisa <Mcclain-Vanderpool.Lisa@epa.gov> wrote:

Brent – sorry for the delay – this is the best I can do for you!

Photographs for the Crestwood spill in Mandaree. (Also called the Aero pipeline).

Eventually they should be up on the website below along with a pollution report:

http://www.epaossc.org/site/site_profile.aspx?site_id=9366

Lisa McClain-Vanderpool

Public Affairs Specialist/Media Officer

Office of Communications and Public Involvement

US Environmental Protection Agency, Region 8

1595 Wynkoop Street

Denver, Colorado 80202

Office [303.312.6077](tel:303.312.6077)

Cell [303.501.4027](tel:303.501.4027)

--
Brent McDonald | Senior Video Journalist, The New York Times | Chicago Bureau | w: 312-552-7201 m: 510-282-1472 | @docubrent

Gordon, Stephanie

From: Edward.McAllister@thomsonreuters.com
Sent: Tuesday, July 15, 2014 10:15 AM
To: Mylott, Richard
Cc: Joshua.Schneyer@thomsonreuters.com
Subject: Reuters Query - North Dakota spill

Hi Rich,

Ed McAllister here at Reuters in New York, doing some research on the wastewater pipeline spill from a pipeline near Lake Sakakawea, ND on July 8. Wondering if you could give us some detail on what happened and how things stand now.

Do you know how much wastewater was spilled and what the wastewater contained? We are unclear if this was drilling brine or something more complex containing fracking fluids and/or oil residue.

Has the spill been contained?

Has the leak been stopped?

What was the cause of the leak?

Have local residents been impacted?

Do you have an incident report on this?

Any information would be much appreciated. Many thanks.

Best,

Edward McAllister
Senior Correspondent
Reuters, New York
+1 646 223 6221

Gordon, Stephanie

From: McClain-Vanderpool, Lisa
Sent: Friday, July 11, 2014 2:18 PM
To: Group R8Eisc
Subject: Tribal contact for press re: ND saltwater spill

Actually – we can refer press calls directly to the Tribe – they are handling the emergency response:

Glenda Embrey at 701-627-8242

From: Rose Brogden [mailto:Brogden.Rose@epamail.epa.gov] **On Behalf Of** Group R8Eisc
Sent: Friday, July 11, 2014 1:59 PM
To: Melinda Bolton
Cc: Group R8Eisc; Mylott, Richard; McClain-Vanderpool, Lisa
Subject: Re: Mandaree Salt Water Spill

Hello,

Your email reached the US EPA Region 8 Environmental Information Service Center (EISC). The press contacts for the information you are requesting are Richard Mylott and Lisa McClain-Vanderpool. You may wish to contact either for guidance regarding your email.

mylott.richard@epa.gov
(303) 312-6654

mcclain-vanderpool.lisa@epa.gov
(303) 312-7077

Thank you for your interest in the environment.

... "Melinda Bolton" ---07/11/2014 12:54:04 PM---Hoping I copied your e-mail address from your calling system correctly!
... Good afternoon,

From: "Melinda Bolton" <mbolton@kxnet.com>
To: Group R8Eisc/OCPI/R8/USEPA/US@EPA
Date: 07/11/2014 12:54 PM
Subject: Mandaree Salt Water Spill

Hoping I copied your e-mail address from your calling system correctly!

... Good afternoon,

My name is Melinda Bolton and I am a reporter for KXMC in Minot, ND. I was out in the oil fields yesterday covering the brine spill near Mandaree, ND. I don't need a confirmation of the oil spill, as we already have that... but I would greatly

appreciate an update on the water conditions. Particularly, if you have done any further testing. In addition an update on the remediation process in general would be appreciated as well.

If you can return the message by phone, that would be preferable. The general number for the news room is (701) 852-2104. That line will only go unanswered between 6 and 6:30 (Central) and 10 and 10:30 Central. At any other time there will be someone available. E-mail is great too, you can reply to kvolk@kxnet.com, to our evening anchor Kelli... or to jolson@kxmcnews.com our news director, Jim.

Thanks for your time,

Melinda

Gordon, Stephanie

From: McClain-Vanderpool, Lisa
Sent: Tuesday, July 29, 2014 10:54 AM
To: mcdonaldb@nytimes.com
Attachments: IMG_3849.jpg; IMG_3850.jpg; IMG_3854.jpg; IMG_3778.jpg; IMG_3780.jpg; IMG_3781.jpg; IMG_3782.jpg; IMG_3783.jpg; IMG_3799.jpg; IMG_3819.jpg; IMG_3825.jpg; IMG_3829.jpg; IMG_3836.jpg; IMG_3837.jpg; IMG_3838.jpg; IMG_3842.jpg

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Office of Communications and Public Involvement
US Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202
Office 303.312.6077
Cell 303.501.4027



U.S. Energy Information
Administration

U.S. States



State Profiles and Energy Estimates

U.S. Overview

State Total Energy Rankings, 2012

Download Table Data as CSV

State	Production		Consumption per Capita		Expenditures per Capita	
	U.S. Share	Rank	Million Btu	Rank	Dollars	Rank
Alaska	2.0%	13	873	2	10,484	1
Alabama	1.8%	15	395	12	5,042	15
Arkansas	1.9%	14	361	17	4,618	20
Arizona	0.8%	27	215	42	3,474	48
California	3.0%	10	201	49	3,589	46

Federal offshore production is not included in the Production Shares.

State	Production		Consumption per Capita		Expenditures per Capita	
	U.S. Share	Rank	Million Btu	Rank	Dollars	Rank
Colorado	3.7%	7	280	33	3,749	41
Connecticut	0.3%	41	203	47	4,191	33
District of Columbia	0.0%	51	267	36	3,398	50
Delaware	0.0%	49	298	28	4,377	26
Florida	0.6%	32	210	44	3,461	49
Georgia	0.7%	29	281	32	4,049	35
Hawaii	0.0%	48	202	48	5,608	6
Iowa	0.9%	24	471	6	5,339	10
Idaho	0.2%	42	325	22	4,215	32
Illinois	3.1%	8	300	26	3,737	42
Indiana	1.3%	20	426	10	4,936	18
Kansas	1.0%	23	390	14	4,944	17
Kentucky	3.0%	9	427	9	5,125	14
Louisiana	4.8%	4	849	3	8,544	4
Massachusetts	0.2%	44	209	45	3,960	38
Maryland	0.3%	39	236	40	3,840	39
Maine	0.2%	43	285	30	5,270	11
Michigan	0.8%	26	274	35	3,978	37
Minnesota	0.5%	33	339	18	4,491	21
Missouri	0.3%	40	301	25	4,340	27
Mississippi	0.5%	35	379	16	5,132	13
Montana	1.3%	21	390	13	5,444	8
North Carolina	0.7%	28	255	38	3,714	43
North Dakota	2.7%	12	788	4	10,049	2
Nebraska	0.5%	36	464	7	5,440	9
New Hampshire	0.2%	45	215	43	4,447	23
New Jersey	0.5%	34	256	37	4,446	24
New Mexico	2.9%	11	330	20	4,285	29
Nevada	0.1%	47	232	41	3,624	45
New York	1.0%	22	179	50	3,327	51
Ohio	1.3%	18	319	23	4,270	30
Oklahoma	3.7%	6	411	11	5,168	12
Oregon	0.6%	30	253	39	3,825	40
Pennsylvania	6.0%	3	284	31	4,227	31
Rhode Island	0.0%	50	173	51	3,568	47
South Carolina	0.8%	25	333	19	4,458	22
South Dakota	0.3%	38	451	8	5,598	7
Tennessee	0.6%	31	325	21	4,436	25
Texas	18.0%	1	471	5	5,983	5
Utah	1.4%	16	277	34	3,706	44
Virginia	1.3%	19	288	29	4,292	28
Vermont	0.1%	46	206	46	5,041	16
Washington	1.4%	17	298	27	3,998	36
Wisconsin	0.4%	37	303	24	4,170	34
West Virginia	4.7%	5	389	15	4,757	19

Federal offshore production is not included in the Production Shares.

State	Production		Consumption per Capita		Expenditures per Capita	
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Wyoming	12.2%	2	949	1	9,828	3

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- Collapse

More State Data & Analysis

by Source

- Petroleum
- Natural Gas
- Electricity
- Coal
- Renewable & Alternative Fuels
- Nuclear
- Environment
- Total Energy

Summary Reports

- Household Energy Use
- State Electricity Summaries
- State Renewable Electricity Statistics
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- Natural Gas Summary Statistics

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Subject: UPDATE: Mandaree, ND Drinking Water

Quick Update:

According to Pete Stevenson, the Army Corps of Engineers was out on the lake in the area of the intake to the Mandaree water plant and did not notice any visible sheen or other indicators that contamination had reached the water plant. As a precautionary measure, the water operators have collected samples from the area around the intake and from the treated water and will test for diesel range organics, sodium (as an indicator of total dissolved solids or brine), metals, and radiologicals. Samples are at the state lab in Bismarck and we should get some preliminary results later today.

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

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weekend but wasn't discovered until Tuesday. The pipeline is not equipped with a system that sends an alert when there's a leak, she said.

"This is something that no company wants on their record, and we are working diligently to clean it up," Jones said.

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That spill came during the infancy of North Dakota's oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the briny water is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

Gordon, Stephanie

From: Mylott, Richard
Sent: Thursday, July 10, 2014 9:38 AM
To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin
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Morris, Brenda

From: Stevenson, Peter
Sent: Tuesday, August 05, 2014 12:06 PM
To: Roos, Judy
Subject: FW: Arrow Pipeline Spill - Fort Berthold/Missouri River's Bear Den Bay

This is the last email I received regarding this Emergency Response.

From: theodora [REDACTED]
Sent: Thursday, July 31, 2014 8:10 PM
To: Stevenson, Peter
Subject: Arrow Pipeline Spill - Fort Berthold/Missouri River's Bear Den Bay

July 30, 2014
Peter Stevenson, On Scene Coordinator, Stevenson.peter@epa.gov
Region 8 EPA
Denver CO

re: Aero Pipeline Oil Spill, Mandaree, ND - EPA Region VIII, NRC#: 1088376, POLREP #2,
Site Number: Z8FL, www.epaosc.org/aeropipeline, Latitude: 47.7300000, Longitude: -
102.6756000.

(otherwise known as the Arrow Pipeline spill north of Mandaree North Dakota, along
the Missouri River's Bear Den Bay – and on the Fort Berthold Indian Reservation).

Peter Stevenson:

I'm a longtime, permanent resident of Mandaree and a tribal member enrolled at Fort
Berthold. As a surface and mineral owner, I'm concerned about any oil & gas damages,
including pipeline spills, to tribal lands and any immediate or long-term associated adverse
impacts to human health in Mandaree residents and on the Fort Berthold Indian Reservation in
western North Dakota.

I'm writing you to request an update. According to your latest online report, July 10, 2014, of
the Arrow ("Aero") Pipeline spill:

"The (pipe)line carries condensate/brine /oil off the reservation to a
treatment plant...The estimate of
spillage is 24,000 barrels of brine and condensate. The majority of it is
estimated to have pooled
on the ground, soaked into the soil, and hung up behind 3 beaver dams....I
saw little evidence of oil,
but will continue ground investigation today, if allowed."

The Arrow Pipeline Spill

- 1) In terms of barrels, what is EPA's most current estimate - or confirmed volume - of the Arrow pipeline spill today?
- 2.) If the pipeline fluid spill was oil & gas brine or 'saltwater' - or contained brine/saltwater - what was the measured **salinity level** of the Arrow pipeline spill?
- 3) The unconventional oil and gas fluid wastes are potentially radioactive. Was the Arrow pipeline fluid spill also **radioactive**?
 - Was the Arrow pipeline fluid spill measured for radioactivity?
 - If so, what was the radioactivity level of the sample?
 - Who measured the radioactivity level of the pipeline fluid spill?
- 4) Your report documents that the Arrow pipeline was used for "condensate/brine/oil." What kind of 'condensate' was spilled in the Arrow pipeline failure?

Arrow pipeline spill and the Missouri River's Bear Den Bay?

- 5) Did the Arrow pipeline fluid spill contaminate the Bear Den Bay water of the Missouri River?
- 6) If not, due to the volume, does the EPA anticipate – or project – that the Arrow pipeline spill contents will reach the Bear Den Bay water of the Missouri River in the future?

EPA's role in the Arrow Pipeline spill

- 7) Your July 10, 2014 report says, "....will continue ground investigation today, if allowed."
 - What were the parameters of the EPA investigation of the Arrow pipeline spill?
 - Who established the parameters of the EPA investigation for the pipeline spill?
 - Is the EPA currently allowed to monitor the after-impacts of the Arrow pipeline spill to the land and waters of the Missouri River?
 - Will EPA have an active future role in monitoring and measuring any continuing dispersal of the pipeline spill - in the land subsurface or in the waters of the Missouri River, specifically the Bear Den Bay?
- 8) Was EPA able to independently verify the actual:
 - volume (barrels) of the pipeline spill
 - fluids in the Arrow pipeline spill
 - salinity level of the pipeline spill

- the radioactivity level of the pipeline fluid spill – if any?
- condensate in the Arrow pipeline spill

9) Or, are EPA reports on the Arrow Pipeline spill only based upon what the pipeline company – or other sources - are reporting to the EPA?

- If so, please name all the **sources** of the data in the current EPA reports for this Arrow pipeline spill.

As a Mandaree landowner and mineral owner, I expect the EPA to be able to independently and objectively investigate any oil and gas spills on tribal and allottee lands of Fort Berthold – free from the influence of both the oil & gas industry and any current tribal administration.

Thank you - and please respond to this email.

Theodora Bird Bear

Mandaree ND

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Cc: Ostrander, David; Williams, Laura; Hestmark, Martin
Subject: FW: photos from crestwood spill - osc.net?
Attachments: IMG_3849.JPG; IMG_3850.JPG; IMG_3854.JPG; IMG_3778.JPG; IMG_3780.JPG; IMG_3781.JPG; IMG_3782.JPG; IMG_3783.JPG; IMG_3799.JPG; IMG_3819.JPG; IMG_3825.JPG; IMG_3829.JPG; IMG_3836.JPG; IMG_3837.JPG; IMG_3838.JPG; IMG_3842.JPG

Lisa

[REDACTED]

Thanks.
Sandy

Sandra A. Stavnes
Deputy Assistant Regional Administrator
Ecosystems Protection and Remediation (8EPR)
USEPA Region 8
1595 Wynkoop St
Denver, CO 80202
email: stavnes.sandra@epa.gov
phone: 303-312-6117

From: Stevenson, Peter
Sent: Friday, July 25, 2014 7:09 AM
To: Ostrander, David
Cc: Stavnes, Sandra; Williams, Laura
Subject: RE: photos from crestwood spill - osc.net?

[REDACTED]

[REDACTED] There is a point of contact, the MHA Nation PIO, that may clear the release of these photos. Please contact her prior to release at g.embrey@mhanation.com. [REDACTED]

From: Ostrander, David
Sent: Thursday, July 24, 2014 4:36 PM
To: Stevenson, Peter
Cc: Stavnes, Sandra; Williams, Laura; McClain-Vanderpool, Lisa
Subject: RE: photos from crestwood spill - osc.net?

[REDACTED]

Thanks

From: Stevenson, Peter
Sent: Thursday, July 24, 2014 4:29 PM
To: Ostrander, David
Subject: RE: photos from crestwood spill - osc.net?

[REDACTED]

From: Ostrander, David
Sent: Thursday, July 24, 2014 3:38 PM
To: Stevenson, Peter
Cc: McClain-Vanderpool, Lisa
Subject: FW: photos from crestwood spill - osc.net?

Pete, I don't see the photos on the osc web site. Can you get photos for Lisa?

From: McClain-Vanderpool, Lisa
Sent: Thursday, July 24, 2014 2:15 PM
To: Ostrander, David
Subject: photos from crestwood spill - osc.net?

David – are there public photos for Crestwood?

[REDACTED]

Morris, Brenda

From: Ostrander, David
Sent: Friday, July 25, 2014 2:07 PM
To: McClain-Vanderpool, Lisa
Subject: FW: photos from crestwood spill - osc.net?
Attachments: IMG_3849.JPG; IMG_3850.JPG; IMG_3854.JPG; IMG_3778.JPG; IMG_3780.JPG; IMG_3781.JPG; IMG_3782.JPG; IMG_3783.JPG; IMG_3799.JPG; IMG_3819.JPG; IMG_3825.JPG; IMG_3829.JPG; IMG_3836.JPG; IMG_3837.JPG; IMG_3838.JPG; IMG_3842.JPG

From: Stevenson, Peter
Sent: Friday, July 25, 2014 7:09 AM
To: Ostrander, David
Cc: Stavnes, Sandra; Williams, Laura
Subject: RE: photos from crestwood spill - osc.net?

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] There is a point of contact, the MHA Nation PIO, that may clear the release of these photos. Please contact her prior to release at g.embrey@mhanation.com. [REDACTED]
[REDACTED]

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Sent: Thursday, July 24, 2014 4:36 PM
To: Stevenson, Peter
Cc: Stavnes, Sandra; Williams, Laura; McClain-Vanderpool, Lisa
Subject: RE: photos from crestwood spill - osc.net?

[REDACTED]
[REDACTED]
Thanks

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Sent: Thursday, July 24, 2014 4:29 PM
To: Ostrander, David
Subject: RE: photos from crestwood spill - osc.net?

[REDACTED]
[REDACTED]
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Cc: McClain-Vanderpool, Lisa
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Subject: photos from crestwood spill - osc.net?

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